

REMARKS

A. Background

Claims 10 and 12-26 were pending in the application at the time of the Office Action. Claims 10, 12, 15, 19, 21 and 24 were rejected as being anticipated by prior art. Claims 13-14 and 22-23 were rejected as being obvious over cited art. By this response, Applicant has amended claims 10, 15 and 19. As such, claims 10 and 12-26 are presented for the Examiner's consideration in light of the following remarks.

B. Proposed Amendments

By this response applicant has amended claims 10, 15 and 19 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a Notice of Allowance. Amendments to claims 10 and 19 are supported by the embodiments of Figures 1a to 3b and the corresponding disclosure in the specification, in particular: page 7, lines 3 to 14; page 7, line 28; page 8, lines 6 to 12. In view of the foregoing discussion, Applicant submits that the amendments to the claims do not introduce new matter and entry therefore is respectively requested.

C. Lack of Novelty Rejections

Paragraph 6 of the Office Action rejects claims 10, 12, 15, 19, 21 and 24 under 35 U.S.C. § 102 as being anticipated by US Patent Number 5,191,893 to Reiten ("*Reiten*").

Reiten shows an arrangement with a first belt monitoring sensor (11) positioned about a limited strip of the torso of a subject at a chest location thereupon and a second belt monitoring sensor (12) at an abdominal location thereupon; the first and second belts being separate

components whilst no component is provided between the belts. The arrangement contains a remote pressure monitoring apparatus 14 with a pressure sensor which is effectively sealed to the tube 13 and which can sense pressure changes occurring only in the confined space of the hollow of the tube. Elongate belts extend entirely around the user's body with buckle pieces 17 and 18 entirely closing belts located above the anterior chest of a subject. The belts (11 and 12) of *Reiten* extend only laterally and are elongate therefore failing to cover the anterior chest wall and at least the upper abdomen. Each belt can only at best cover a portion of the chest or abdomen. Neither can cover both the chest and the abdomen. The belts can only be subjected to lateral extension and therefore any monitoring of the displacement of the lung region is limited. The airtight enclosure 15 does not cover the anterior chest or upper abdomen. By contrast, buckle pieces 17 and 18 are present in the anterior portion for belt 11 and in the middle abdomen portion for belt 12 of the subject.

In view of the foregoing, *Reiten* fails to disclose at least the following limitations present in amended independent claims 10 and 19: **a front panel corresponding to the user's front; a rear panel corresponding to the user's back; a front panel extending from said upper aperture to said lower aperture and being sized and shaped to cover the anterior chest wall and at least the upper abdomen; and the chamber being sized and shaped so as to substantially entirely cover the anterior chest wall and at least the upper abdomen.**

Accordingly, applicant submits that amended claims 10 and 19 are not anticipated by *Reiten* and withdrawal of the rejection is respectfully requested.

Claims 12, 15, 21 and 24 depend from claim 10 or 19 and thus incorporate the limitations thereof. As such, applicant submits that claims 12, 15, 21 and 24 are novel over *Reiten* for at

least the same reasons as discussed above with regard to claims 10 and 19. As such, withdrawal of the anticipation rejection is respectfully requested.

D. Obviousness Rejections

1. *Reiten* /*Wright* combination

Paragraph 8 of the Office Action rejects claims 13-14 and 22-23 under 35 U.S.C. § 103(a) as being unpatentable over US Patent Number 5,191,893 to Reiten (“*Reiten*”) in view of US Patent Number 4,559,953 to Wright et al (“*Wright*”).

As discussed above *Reiten* fails to teach a number of features of presently amended claims 10 and 19. Furthermore, *Wright* also fails to teach:

- A front panel corresponding to the user’s front;
- A rear panel corresponding to the user’s back since *Wright*’s apparatus for detecting and measuring changes in the shape of a wall of a body is only suitable to be placed either on the front or the back of a user (see Column 2 lines 28 to 37 where the size of the capsule is limited to between 20-30 millimeters);
- An upper aperture sized and shaped to allow the user’s head to be outside the item when worn is also not presented; the apparatus in *Wright* presents no aperture other than the aperture of nozzle 6 which projects from the rim (see figures 1-5 and their corresponding description);
- A lower aperture sized and shaped to allow the user’s legs to be outside the item when worn is also not present since the only aperture in *Wright* is the nozzle’s aperture (see figures 1-5 and their corresponding description) ;

- The front panel of *Wright* is not sized and shaped to substantially entirely cover the anterior chest wall and at least the upper abdomen since it is only of limited size as indicated in Column 2 lines 28 to 37 “the body 2 suitably has a diameter in the range of 20 to 30mms”;
- The chamber fails to be sized and shaped to substantially entirely cover the anterior chest wall and at least the upper abdomen for the reasons provided above.

Accordingly, because both *Reiten* and *Wright* fail to disclose or suggest the above limitations of claims 10 and 19, applicant submits that claims 10 and 19 cannot be obvious over the combination of the references.

In addition, *Wright* emphasizes the requirement for relatively small diameter sensors as indicated by column 2, lines 28 to 37 where a maximum diameter of 30 mm for adults is envisaged whilst for neonates a diameter of 20 mm is preferred. There are no hints or suggestions in either *Reiten* or *Wright* as to modifying the structure to substantially entirely cover the anterior chest wall and at least the upper abdomen.

Reiten teaches against employing a chamber over the anterior chest wall and at least the lower abdomen since the chamber is not present where the buckle is presented in Figure 1 of *Reiten*. Neither the disclosure of *Reiten* nor the disclosure of *Wright* goes beyond the determination of localized fluctuations. There is no suggestion or hint as to how to obtain information with regards to the volumetric changes of the entire lungs. Accordingly, claims 10 and 19 are non-obvious over the cited prior art.

Claims 13-14 and 22-23 depend from claim 10 or 19 and therefore incorporate the limitations thereof. As such, Applicant submits that claims 13-14 and 22-23 are distinguished

over the cited art for at least the same reasons discussed above with regards to claims 10 and 19. Accordingly, the applicant respectfully requests that the obviousness rejection with regard to claims 13-14 and 22-23 also be withdrawn.

2. *Reiten* /*Sackner* combination

Paragraph 9 of the Office Action rejects claims 16-17 and 25-26 under 35 U.S.C. § 103(a) as being unpatentable over *Reiten* in view of US 5,159,935 to Sackner et al ("*Sackner*").

As detailed above *Reiten* differs from the claimed invention. In addition, *Sackner* at least fails to show an item incorporating a front panel extending from said upper aperture to said lower aperture and being sized and shaped to substantially entirely cover the anterior chest wall and at least the upper abdomen; since it shows a narrow band 12, 14 covering only a limited area of the anterior chest as can be seen in Figures 1a to 1c; 12a to 15 and as described in their accompanying text. In addition, *Sackner* uses transducers formed by conductive wire loops 20 and 21 instead of a sensor which is directly exposed to the enclosed volume for sensing changes in pressure throughout inspiration and expiration. The combination of *Reiten* and *Sackner* therefore fails to teach the limitations of claims 10 and 19.

In addition, both *Sackner* and *Reiten* teach away from employing panels which substantially entirely cover the anterior chest wall and at least the upper abdomen. They also teach against employing a chamber which entirely covers the anterior chest wall and at least the upper abdomen since in each case they disclose elongate strips destined for stretching. *Sackner* teaches the use of bands, see for example column 11, lines 50 to 61 where "right lung band 12 and left lung band 14" are employed. *Reiten* also teaches the use of belts such as described in column 3, lines 34 to 43 where it is stated that "an elastic belt 16... can be stretched lengthwise".

Neither *Sackner* nor *Reiten* suggest the modification of sizing and shaping at least one chamber to substantially entirely cover the anterior chest wall and at least the upper abdomen. Accordingly, the limitations of claims 10 and claim 19 are not obvious when considering the combination of *Reiten* and *Sackner*.

Since claim 16-17 and 25-26 depend from either claim 10 or claim 19 and incorporate the limitations thereof, Applicant submits that claims 16-17 and 25-26 are distinguished over the cited art for at least the same reasons discussed above with regards to claims 10 and 19. Accordingly, the applicant respectfully requests that the obviousness rejection with regard to claim 16-17 and 25-26 be withdrawn.

E. Conclusion

The applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, Applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, Applicant respectfully requests the Examiner's reconsideration and allowance of claims 10 and 12-26 as amended and presented herein. In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 10th day of October 2008.

Respectfully submitted,

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